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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,479	05/24/2006	Yong-Geun Hong	CU-4833 WWP	4340

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EXAMINER

SARWAR, BABAR

ART UNIT	PAPER NUMBER
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2617

MAIL DATE	DELIVERY MODE
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10/26/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/580,479	Applicant(s) HONG ET AL.	
	Examiner BABAR SARWAR	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,5,7 and 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,5,7 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/12/2010 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The beginning of the preamble mentions "A method for performing mobile **IPv6 fast level 2** between access points (APs) and a mobile node (MN)..." indicating missing terms, and rendering the preamble incomplete.

Appropriate correction is required.

Lines 10-11 of the claim mention "the 'C' flag transmits a source link-layer address option" rendering the claim unintelligible as to how a flag can transmit a source link-layer address option. The specification of the instant application states that the 'C'

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flag is added to modify the prefix information option (See e.g., ¶ [0071]-¶ [0072], Fig. 6 one bit C flag).

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4-5, 7, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gwon (US Pub. No.: 2003/0104814 A1) in view of Kakemizu (US Pub. No.: 2002/0006133 A1), and further in view of Koodli (US Pat. No.: 6,930,988 B2).

As per claim 1, Gwon teaches a method for performing mobile IPv6 fast level 2 between access points (APs) and a mobile node (MN) (See Gwon e.g., the micro-level i.e., layer 2 handover involving the change in location of a MN within an AP subnetwork of ¶ [0041], Fig. 1) and layer 3 handover between access routers (ARs) and a mobile node (MN) (See Gwon e.g., the macro level handoff i.e., layer 3 handover involving the change in location of the MN from one subnetwork served by one agent to another subnetwork served by another agent of ¶ [0041], Fig. 1), each AR having a subnet composed of at least one access point (AP) that can interface between the MN and each corresponding AR (See Gwon e.g., the MN, the HA, the FA and the APs of ¶ [0039], Fig. 1 elements 135, 145, and 155), the method comprising the steps of:

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receiving, at a given AR, a modified Router Solicitation (RS) message from the MN after completion of a layer 2 handover between the MN and the given AR (See Gwon e.g., the MN being within the FA1 subnetwork, the CoA provided by the FA1, the registration of the CoA as a binding information with HA of ¶ [0043], Fig. 2); transmitting from the given AR, a general Router Advertisement (RA) message to the MN (See Gwon e.g., the layer 2 handoff i.e. AP to AP handover within same subnetwork of ¶ [0041], Fig. 1 elements 135, 145, and 155) when the layer 2 handover of the MN occurs between a previously connected AP and a newly connected AP such that the previously connected AP and the newly connected AP both belong to the same subnet of the given AR (See Gwon e.g., the micro-level i.e., the layer 2 handoff within same subnetwork of ¶ [0041], Fig. 1), wherein the general RA message transmitted from the given AR is for directing the MN to continue using the CoA set by the MN (See Gwon e.g., the communication and the handoff of the MN within the same subnetwork of ¶ [0042]); generating, at the given AR, a new CoA when layer 3 handover of the MN occurs between the previous connected AP and the newly connected AP such that the previously connected AP does not belong to a subnet of the given AR (See Gwon e.g., the macro-level handover i.e., layer 3 handover from FA1 to FA2 of the MN of ¶ [0044], Fig. 2).

Gwon further teaches the newly connected AP belongs to the subnet of the given connected AR (See Gwon e.g., the APs of the FA2s, the access points within the same new subnetwork of FA2 of ¶ [0045], Fig. 2). However, Gwon is silent about the modified RS message having a message format comprising a 'C' flag signifying that a Care of Address (CoA) is set and which the 'C' flag transmits a source link-layer address option.

In an analogous field of endeavor, Kakemizu teaches the modified RS message having a message format comprising a 'C' flag signifying that a Care of Address (CoA) is set and which the 'C' flag transmits a source link-layer address option (See Kakemizu e.g., the IPv6, an IPsec (IP security protocol), and an encryption protocol for encrypting the option header and the payload of the IP packet, determining depending on the setting of the C flag in the IP header as to whether or not the option header is to be Encrypted of ¶ [0150]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide above teachings of Kakemizu to Gwon for the purpose of enhancing the registration process by controlling the encryption of the option header as suggested (See Kakemizu e.g., ¶ [0174]).

Gwon and Kakemizu are silent about performing, at the given AR, a Duplicate Address Detection (DAD) process to inspect a uniqueness of the new CoA wherein the performing step is performed subsequent to the generating step; and transmitting, from the given AR to the MN, a modified RA message containing the new CoA to update a network address of the MN, wherein the transmitting step is performed subsequent to the performing step.

In an analogous field of endeavor, Koodli teaches performing, at the given AR, a Duplicate Address Detection (DAD) process to inspect a uniqueness of the new CoA (See Koodli e.g., the DAD checking the uniqueness of the address of Col. 2:24-40) wherein the performing step is performed subsequent to the generating step (See Koodli e.g., the DAD checking is performed for the address i.e. first the address is

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determined then DAD is performed for a unique address of Col. 2:24-40); and transmitting, from the given AR to the MN, a modified RA message containing the new CoA to update a network address of the MN (See Koodli e.g., the router assigning the new address to the MN of Col. 7:10-14), wherein the transmitting step is performed subsequent to the performing step (See Koodli e.g., the address is determined, uniqueness is confirmed, and the address is transmitted to the MN of Col. 2:24-40, Col. 7:10-14).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide above teachings of Koodli to Gwon, Kakemizu for the purpose of avoiding the handover latencies as suggested (See Koodli e.g., Col. 1:11-48).

As per claim 4, the combination teaches everything claimed as applied in the rejected claim 1. In addition, Gwon teaches wherein the MN transmits the modified RS as soon as the layer 2 handover is complete (See Gwon e.g., the MN receiving the RA as soon as it enters the FA2 subnet of ¶ [0044], Fig. 2).

As per claim 5, the combination teaches everything claimed as applied in the rejected claim 4. In addition, Gwon teaches wherein movement of the MN In layer 3 is detected by the given AR when the given AR determines that the previously connected AP does not belong to the subnet of the given AR (See Gwon e.g., the macro-level handover i.e., layer 3 handover from FA1 to FA2 of the MN of ¶ [0044], Fig. 2).

As per claim 7, the combination teaches everything claimed as applied in the rejected claim 1. In addition, Gwon teaches wherein the modified RA message includes

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a flag which signifies the generation of the new CoA (See Gwon e.g., the indication or trigger for generation of new CoA i.e. I2, I3 triggers of ¶ [0044], Fig. 2).

As per claim 10, the combination teaches everything claimed as applied in the rejected claim 1. In addition, Koodli teaches wherein the MN does not perform the DAD process after receiving the modified RA (See Koodli e.g., the router determining the address, upon confliction, MN configuring another address of Col. 2:11-23).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BABAR SARWAR whose telephone number is (571)270-5584. The examiner can normally be reached on MONDAY TO FRIDAY 09:00 A.M -05:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NICK CORSARO can be reached on (571)272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BABAR SARWAR/
Examiner, Art Unit 2617

/KAMRAN AFSHAR/
Primary Examiner, Art Unit 2617